PTO/SB/21 (02-04)
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TRANSMITTAL FORM

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Application Number	10/068,979
Filing Date	February 11, 2002
First Named Inventor	Gary RENSBERGER
Art Unit	2675
Examiner Name	Ming Hun Liu
Total Number of Pages in This Submission: 11	Attorney Docket Number: 003797.00219

ENCLOSURES ***(check all that apply)***

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  - ☐ Affidavits/declaration(s)
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- ☐ Response to Missing Parts/ Incomplete Application
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Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Jordan N. Bodner, Reg. No. 42,338
Signature	
Date	June 7, 2004

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5/Reconsideration
CR 6/7/04
(AF)

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
Gary RENSBERGER	)	Group Art Unit: 2675
	)	
Serial Number: 10/068,979 ✓	)	Examiner: Ming Hun Liu
	)	
Filed: February 11, 2002	)	Attorney Docket No.: 03797.00219
	)	
For: Method and Apparatus for Cursor Smoothing by Matching Cursor With Refresh Rate of the Display	)	

REQUEST FOR RECONSIDERATION

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Sir:

This communication is responsive to the final Office Action mailed April 20, 2004 (paper no. 4). Claims 1-6, 8, and 23-29 remain pending. Reconsideration and allowance are respectfully requested.

Claims 1-4 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,589,893 to Gaugham et al. ("Gaugham") in view of U.S. Patent No. 5,185,597 to Pappas et al. ("Pappas"). Claims 5, 6, and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Gaugham in view of Pappas, and further in view of U.S. Patent No. 5,327,528 to Hidaka et al. ("Hidaka").

Claims 23-29 are also rejected, however the nature of this rejection is unclear. The rejection of claims 23-29 is improper because it neither fully and clearly states the grounds of rejection nor designates the statutory basis for the grounds of rejection, as required by MPEP 707.07(d). For this reason alone, the rejection of claims 23-29 is overcome. Nonetheless, to move prosecution forward, Applicant will assume for purposes of this response that claims 23-27 and 29 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Gaugham in view of Hidaka, and that claim 28 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Gaugham alone. Should claims 23-29 continue to be rejected, *Applicant requests that the Examiner clearly state the grounds of rejection* so that Applicant may have a fair opportunity to respond. Applicant respectfully traverses all rejections.

Independent Claim 1

Claim 1 is directed to a method of smoothing cursor movement. The claimed method includes reporting to a data input device having a display, at a reporting time, a predetermined portion of an amount of the movement in a first direction; and reporting, in at least one subsequent reporting step, a remainder of the amount of the movement in the first direction, wherein an amount of time between report times is no larger than an amount of time between refreshes of the display. For example, report times may occur every 12 milliseconds, while display refreshes may occur every 14 milliseconds. *See, e.g.*, specification, Figure 8.

As conceded by the Office Action, Gaugham fails to teach or suggest that the amount of time between report times is no larger than the amount of time between

refreshes of a display, as required by claim 1. The Office Action instead relies on Pappas, referring to col. 2, lns. 35-45. This portion of Pappas discloses that the refresh rate of a display should be 60 Hz to avoid flicker. In Pappas, refreshing the display is to write the frame buffer on to the display. The frame buffer in Pappas contains a bit map of the entire screen to be displayed. Although the screen to be displayed may include a cursor among other display elements, there is nothing in Pappas that compares movement amount report intervals with the display refresh rate. Indeed, the proposed combination of Gaugham and Pappas would, at best, result in the system of Gaugham having a display refresh rate of 60 Hz.

The Office Action argues that this claim feature is inherent to Pappas, because "the information reporting time obviously would have to be shorter than the refresh rate. Inherently, information must be supplied prior to the use of the information. . . . Obviously, data must arrive before it can be properly displayed." Office Action, pp. 2 and 5. The Office Action appears to be saying that cursor position information inherently must to be received before that information can affect the displayed cursor. However, this is irrelevant as to whether the amount of time *between* report times is no larger than the amount of time *between* refreshes of a display as claimed.

Because Pappas does not relate a report rate with a refresh rate, there could be any number of relationships between these two rates. For instance, Pappas could have a higher report rate than a refresh rate. The fact that a certain characteristic *may* be present in the prior art is not sufficient to establish the inherency of that result or characteristic. MPEP 2112. Inherency may not be established by probabilities or possibilities. MPEP

2112; *In re Robertson*, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). The allegedly inherent characteristic must *necessarily* flow from the teachings of the applied prior art. MPEP 2112; *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). In the case of Pappas, it is not necessary, and therefore not inherent, that the amount of time *between* report times is no larger than the amount of time *between* refreshes.

In addition, the Office Action does not provide a valid motivation to combine Gaugham and Pappas as proposed, and so the rejection fails to make our a *prima facie* case of obviousness. The Office Action states that, "without synchronizing the cursor and display refresh rates, a smooth cursor movement that Gaugham wishes to achieve would be impossible." Office Action, p. 3. This is simply not true. Without conceding that Gaugham operates as intended at all, it is not necessary that the reporting rate and the display refresh rate be synchronized in Gaugham. Moreover, as previously discussed, neither Gaugham nor Pappas teach, suggest, or even imply that the reporting rate and the display refresh rate should be synchronized. Thus, the basic premise behind the Office Action's stated motivation is simply not found in the asserted art.

Accordingly, neither Gaugham nor Pappas, either alone or in combination, teach or suggest that an amount of time between report times is no larger than an amount of time between refreshes of a display, as required by claim 1. Accordingly, Applicant submits that claim 1 is allowable.

Independent Claim 23

Independent claim 23 is directed to an apparatus for smoothing cursor movement. The claimed apparatus includes an input configured to receive first data representing a

series of original movement amounts of a pointing device; a processor configured to partition the original movement amounts into smaller movement amounts; and an output configured to output second data representing a series of the smaller movement amounts, the number of smaller movement amounts output per original movement amount being variable.

The Office Action states that Gaugham "does not specifically state that the partitions must be of the same size or different size, however as demonstrated by Hidaka, the partitions can be made in several different ways and sizes." Office Action, p. 4. This is a misleading argument, because Hidaka discloses partitioning a *graphics object*, not cursor movement. In particular, Hidaka is directed to moving a cursor while constrained on the contour of the graphics object. Hidaka, col. 1, lns. 8-12; col. 7, lns. 11-15. The graphics object has one or more segments, and each segment is divided into a plurality of intervals. Hidaka, col. 3, lns. 30-32; col. 7, lns. 44-45; Fig. 15A. The mouse cursor can move in a "discontinuous mode," meaning that the cursor will jump from one interval to the other as it moves, instead of continuously along the contour of the graphics object. Hidaka, col. 7, ln. 44 to col. 8, ln. 30; Figs. 15B-15D.

Thus, instead of disclosing partitioning an original mouse movement amount into a plurality of smaller movement amounts as claimed, Hidaka instead discloses partitioning a *graphics object* into intervals. Depending upon the mode, the mouse cursor of Hidaka may be limited to skip from interval to interval. However, this has nothing to do with partitioning an original mouse movement amount into a plurality of smaller movement amounts.

Applicant suspects that the Examiner may also be referring to the following text in Hidaka:

> FIG. 6 shows the relationship between the mouse moved on a desk and the position pointed to on the screen. The movement of the mouse on the desk is divided to small parts and thereby reduced to a series of numerous linear movements on a two-dimensional plane. The individual linear movements are mapped on the display screen.

Hidaka, col. 5, lns. 26-32. This excerpt from Hidaka merely refers to how a conventional mouse works: the physical movements of the mouse on the desk surface are sampled at a high rate as small linear movements. Again, this excerpt fails to teach or suggest partitioning an original mouse movement amount into a plurality of smaller movement amounts.

In short, as conceded by the Office Action, Gaugham fails to teach or suggest the number of smaller movement amounts output per original movement amount being variable as claimed. Nor does Hidaka, as discussed above. Any combination of the two references still would fail to teach or suggest this feature of claim 23. At best, a combination of Gaugham and Hidaka may result in the system of Gaugham where the cursor is constrained to the contour of a graphics object, and where the graphics object is divided into intervals. Accordingly, Applicant submits that claim 23 is allowable.

Independent Claim 25

Independent claim 25 is also allowable over Gaugham and Pappas, either alone or in combination, for at least similar reasons that claim 23 is allowable, and further in view of the differing features recited therein.

Independent Claim 27

Independent claim 27 is directed to an apparatus for smoothing cursor movement. The claimed apparatus includes an output configured to output second data representing a series of smaller movement amounts to a computer having a display, the second data being output at a reporting rate that is asynchronous with a refresh rate of the display.

The Office Action states that this claim is rejected on the grounds presented in claim 1, and further mentions Hidaka. *As discussed previously, neither Gaugham nor Hidaka teach or suggest a reporting rate relative to a refresh rate.* For at least this reason, neither Gaugham nor Hidaka, either alone or in combination, teaches or suggests second data being output at a reporting rate that is asynchronous with a refresh rate of a display, as required by claim 27. Accordingly, Applicant submits that claim 27 is allowable.

Independent Claim 28

Independent claim 29 is directed to an apparatus for smoothing cursor movement. The claimed apparatus includes an input configured to receive first data representing a series of original movement amounts of a pointing device; a processor configured to partition the original movement amounts into smaller movement amounts; and a universal serial bus (USB) output configured to output second data representing a series of the smaller movement amounts.

The Office Action concedes that none of the asserted art teaches or suggests using a USB output as claimed. The Office Action attempts to make up for this deficiency by arguing that "USB connections are commonly used to connect different peripheries [sic]

to computer systems. It would have been obvious to one skilled in the art to use USB connections to promote transferability between systems." Office Action, p. 4.

The Office Action proposes to have modified Gaugham by such that its IR receiver 34 (Fig. 1) would have been coupled to the microprocessor 26 via a USB connection. Even if this modification had been viable (which is not conceded), it still would not have resulted in the claimed invention. The IR receiver 34 is, quite simply, an IR receiver. It does not process the data it receives by dividing cursor movement amounts into smaller amounts. Instead, processing is of course performed by the microprocessor 26. Therefore, even if modified as proposed, the data emitted from the IR receiver 34 to the microprocessor 26 over the proposed USB connection could not have been the claimed second data representing the series of smaller movement amounts. For at least this reason, Applicant submits that claim 28 is allowable over Gaugham.

Independent Claim 29

Independent claim 29 is directed to an apparatus for smoothing cursor movement. The claimed apparatus includes an input configured to receive first data representing a series of original movement amounts of a pointing device at a first regular interval. A processor is also included that is configured to partition the original movement amounts into smaller movement amounts. Also, an output is included that is configured to output second data representing a series of the smaller movement amounts at a second regular interval to a computer having a display. Finally, the claim recites that the display is refreshed at a third regular interval, the second regular interval being shorter than the first and third regular intervals, the first regular interval being longer than the third regular

interval. Thus, claim 29 calls for three regular intervals, and recites their lengths relative to one another.

To reject this lengthy and detailed claim, the Office Action simply states that this claim is rejected on the same basis as claim 1, and that Hidaka demonstrates that partitions can be made in several different ways and sizes. Again, Hidaka does not teach or suggest partitioning movement amounts into smaller movement amounts at all, much less "in several different ways and sizes" as alleged by the Office Action. Moreover, claim 29 recites a particular relationship between the three sets of regular intervals. Even if Hidaka does disclose partitioning "in several different ways and sizes" as suggested by the Office Action, neither Gaugham nor Hidaka, either alone or in combination, teaches or suggests, not just *any* relationship between the intervals, but specifically that the claimed second regular interval is *shorter* than the claimed first and third regular intervals, and that the first regular interval is *longer* than the third regular interval, as required by claim 29. Accordingly, Applicant submits that claim 29 is allowable.

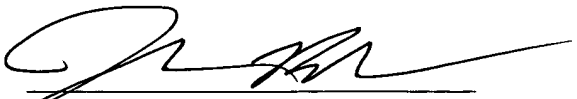
The Remaining Dependent Claims

The remaining dependent claims are also allowable for at least those reasons that their respective independent claims are allowable, and further in view of the additional features recited therein. Moreover, as to dependent claims 5, 6, and 8, Hidaka fails to make up for the deficiencies of Gaugham and Pappas (over which independent claim 1 was rejected).

Conclusion

Applicant believes that the present application is in condition for allowance, and notification of the same is respectfully requested. Should the Examiner feel that a telephone call would expedite prosecution, the Examiner is invited to contact the undersigned at the number below.

Respectfully submitted,



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Dated: June 7, 2004